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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,592	12/31/2003	Leonard V. Knappmiller		8517

7590 03/22/2005  
KEVIN ELLICOTT  
SUITE 112  
1 SCALE AVE  
RUTLAND, VT 05701

EXAMINER

PATEL, VINOD D

ART UNIT PAPER NUMBER

3742

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

80N

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/749,592	KNAPPMILLER, LEONARD V.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Vinod D. Patel	3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED OFFICE ACTION

### INTRODUCTION

1. This application/control number 10/749592 has been examined. This is the first action on the merits of the claimed invention. The application has claims 1-7 pending.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Heise (US5878533).

Heise discloses a building eaves heater (30) comprising; a heating element (58), the heating element having a first end and an opposite second end, the first end having an electrical connection means (power is supplied to cable 58, column 1, line 28), the heating element having length, a sheathe (Fig. 3), the sheathe having a hollow interior (56) (column 2, line 42), a first end and an opposite second end, a. the sheathe having an opening passing through the first end for communicating with the hollow interior, the heating element being located within the hollow interior, the heating element second end and the sheathe second end being proximate to one another, the sheathe having length, the sheathe length being less than the heating element length so that the heating element electrical connection means extends through the sheath first end opening and out of the sheathe hollow interior (The end of the cable is connected to a suitable power source on the outside of the house) ( column 3, line 20-21), sheathe attachment means

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(screw 72, nail or adhesive or other fastening) (column 3, line 10-13), the sheathe attachment means inherently permitting attachment of the sheathe to an underside of a metal roof (sufficient of the apparatus 30 is installed to extend along the roof panel in the area where the ice is likely to form) (column 3, lines 24-25, 42-43, column 4, lines 24-27).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heise (US6852951) in view of Solin (US3725638).

Heise discloses the heating element (58) of known design and includes a protective outer sheath (64) is well known and is available from Heat-Line Corporation, Canarvon, Ontario under the trade-mark Paladin I.

Heise discloses the claimed invention except for silicone rubber heating element, the heating element having a length of approximately twenty five feet and width being approximately one inch.

Solin discloses a heat radiating assembly and an apparatus using a plurality of heat radiating assemblies for melting ice (Fig 1-10) comprising a heating element (20) having outer flexible protective sheath made of silicon rubber (column 2, line 49-51), the outer flexible sheath is moisture resistant which is important to protect the resistant element since the heat radiating assembly is constantly exposed to melted ice or snow during the winter. Additionally,

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the rubberized sheath of the flexible heating element (20) is substantially temperature variation insensitive which is critical in avoiding destructive cracking under wide ranges of temperature to which the element (20) is subjected (column 5, 6 lines 52-67, 1-5). The flexible heat generating element (20) or the heat radiating assembly preferably is about one to about twelve inches wide depending upon the heating that is desired. Preferably, a two or three inch width is more desirable. In one example, using a five foot long heat radiating assembly that has a flexible heat generating element about three inches wide provided. The heating temperature provided by each heat radiating assembly can be varied depending upon the external temperature, material construction of the roof, etc.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use silicon rubber heating element as taught by Solin for the heating element of Heis to provide the desired heat to appropriate structure and to protect the resistance element from moisture which is important since the heat radiating assembly is constantly exposed to melted ice or snow during the winter and to avoid destructive cracking under wide ranges of temperature to which the heating element is subjected.

It is well established that the above listed variables are result-effective variables; that is, variables which achieve a recognized result before the determination of their optimum or workable ranges by routine experimentation. In re Antonie, 559 F.2d 618, 620, 195 USPQ 6,8 (CCPA 1977). General conditions of the claims are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by engineering or routine experimentation. It would have been obvious to one having ordinary skill in the art at the time the invention was to

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modify the result-effective variables in Heise to the values and ranges as claimed by using routine engineering procedure to optimize the operation of the heating device.

6. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heise (US6852951) in view of Tiburzin (US5786563).

Heise discloses the claimed invention except for the second heating element and the second heating element is connected to the first heating element and plurality of heating elements connected to each other.

Tiburzin discloses (Fig 1, 11) comprising series of interconnecting heating panels (1) to remove snow and ice from the roof.

It would have been obvious to one of ordinary skill in the art to inteconnect building eves heater (that is connecting second heating element to first heating element and so on) as taught by Tiburzin for the building eves heater of Heise to remove snow and ice from the roof of desired length.

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heise (US6852951) in view of Tiburzin (US5786563) and Swanfeld (US5878533).

Claim differs from cited art in calling for a sheathe bracket.

Swanfeld discloses a heated gutter system (10) comprising a roof gutter (12), a plurality of sheathe brackets (14), heat generating means (50) positioned between the sheathe bracket and gutter to prevent the build up of ice and snow.

It would have been obvious to one of ordinary skill in the art to provide a provide a sheathe bracket as taught by Swanfeld for the modified device of Heise to support the sheathe and provide heat to desired area.


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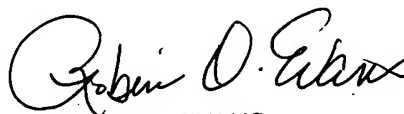
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vinod D. Patel whose telephone number is 571-272-4785. The examiner can normally be reached on 7.30 A.M. TO 4.00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 571-272-4777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VP

  
Vinod Patel  
Patent Examiner  
Art Unit 3742

  
ROBIN O. EVANS  
PRIMARY EXAMINER  
3/17/05